

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/059948 A1

(51) International Patent Classification⁷: H01J 37/32
(21) International Application Number:
PCT/GB2004/005230

(22) International Filing Date:
14 December 2004 (14.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0329460.0 19 December 2003 (19.12.2003) GB

(71) Applicant (for all designated States except US): OXFORD INSTRUMENTS PLASMA TECHNOLOGY LIMITED [GB/GB]; Old Station Way, Eynsham, Oxford OX8 1TL (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SINGH, Nityalendra [GB/GB]; 234 Ellan Hay Road, Bradley Stoke BS32 0HF (GB). CROAD, Roger, James, Wiltshire [GB/GB]; 25 Durlough Road, Bridgwater, Somerset TA6 7HX (GB).

(74) Agent: GILL JENNINGS & EVERY; Broadgate House, 7 Eldon Street, London EC2M 7LH (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

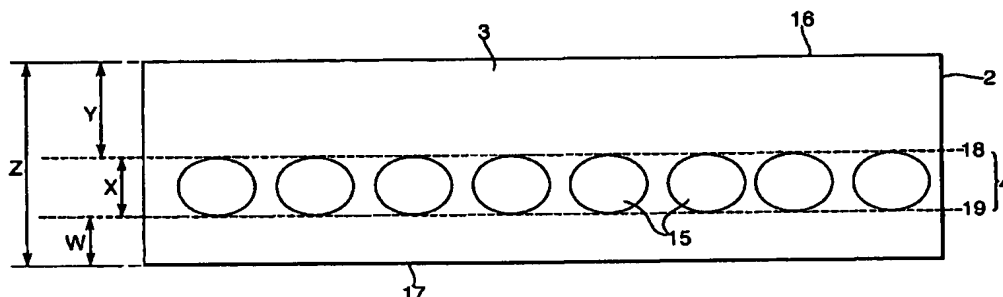
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: APPARATUS AND METHOD FOR PLASMA PROCESSING



(57) Abstract: Plasma processing apparatus is provided having a chamber (1), first (3) and second (8) electrodes, and power supply (10) to generate the plasma. The first electrode (3) is formed from a nickel alloy having substantially planar upper (16) and lower (17) surfaces. A heater (4) heats at least the first electrode (3) to a processing temperature. The heater (4) comprises one or more heating members (15) arranged in a substantially planar manner, the heater (4) and first electrode (3) forming an assembly such that the parts of the one or more heating members (15) that are closest to an upper surface (16) of the first electrode (3), define a first plane (18) that is separated from the upper surface (16) by a distance Y, the parts of the one or more heating members (15) that are furthest from the upper surface (16) of the first electrode (3), define a second plane (19), where in the separation of the first (18) and second (19) planes defines a heater thickness X and wherein Y lies in the range 1.2X to 3X.

WO 2005/059948 A1